

PATENT
Customer Number 22,852
Attorney Docket No. 7040.0043.01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Renato CARETTA et al.)
Serial No.: Not yet assigned) Group Art Unit: Not yet assigned
Filed: December 26, 2001) Examiner: Not yet assigned
For: A PROCESS FOR)
MANUFACTURING, MOULDING)
AND CURING TYRES FOR)
VEHICLE WHEELS)

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above-captioned application, please amend this
application as follows:

IN THE SPECIFICATION:

Please amend the specification, as follows:

Add two section headings, a section subheading, and a paragraph immediately after the
title A PROCESS FOR MANUFACTURING, MOULDING AND CURING TYRES FOR
VEHICLE WHEELS, as follows:

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--CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a divisional of U.S. Patent Application Serial No. 09/365,231, filed July 30, 1999, in the U.S. Patent and Trademark Office; additionally, Applicants claim the right of priority under 35 U.S.C. § 119(a) - (d) based on patent application No. 98830473.9, filed July 31, 1998, in the European Patent Office, and patent application No. 98830696.5, filed November 20, 1998, in the European Patent Office; further, Applicants claim the benefit under 35 U.S.C. § 119(e) based on prior-filed, copending provisional application No. 60/108,887, filed November 17, 1998, in the U.S. Patent and Trademark Office, and prior-filed, copending provisional application No. 60/124,523, filed March 16, 1999, in the U.S. Patent and Trademark Office; the contents of all of which are relied upon and incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention--

Page 1, line 9, add section subheading --Description of the Related Art-- prior to the start of the paragraph beginning "In a cycle for vehicle wheel tyre production"

Page 4, line 26, add section heading --SUMMARY OF THE INVENTION-- prior to the start of the paragraph beginning "In accordance with the present invention"

Page 8, line 23, add section heading --BRIEF DESCRIPTION OF THE DRAWINGS-- prior to the start of the paragraph beginning "Further features and advantages"

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Page 9, line 1, add section heading --DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENTS-- prior to the start of the paragraph beginning "Referring
particularly to Fig. 1"

Renumber pages 1-3 of the claims as pages 22-24.

Delete the Abstract in its entirety and add a new page 25 after the claims, adding the
following ABSTRACT OF THE DISCLOSURE. A new, separate page 25 including the
ABSTRACT OF THE DISCLOSURE is enclosed.

--ABSTRACT OF THE DISCLOSURE

A process for manufacturing, moulding, and curing a tyre includes the steps of
manufacturing a tyre comprising a first elastomer material, providing an inner surface of the tyre
with a treatment to prevent permeation of a fluid under pressure through the treatment, closing
the tyre into a moulding cavity defined in a vulcanization mould, admitting a fluid under pressure
into a space defined by the treatment in order to press an outer surface of the tyre against the at
least one wall of the moulding cavity, and applying heat to the tyre to vulcanize the first
elastomer material. A shape of the at least one wall of the moulding cavity matches a shape of
the outer surface of the tyre after vulcanization is complete. The treatment includes at least one
layer of a second elastomer material having a sulfur-curable polymeric base and a vulcanizing
system dissolved in an organic solvent.--

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IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims 2-16, and add new claims 17-26, as follows:

--17. (new) A process for manufacturing, moulding, and curing a tyre, comprising the steps of:

manufacturing a green tyre comprising a first elastomer material;

providing an inner surface of the tyre with a treatment to prevent permeation of a fluid under pressure through the treatment;

closing the tyre into a moulding cavity defined in a vulcanization mould, the moulding cavity including at least one wall;

admitting a fluid under pressure into a space defined by the treatment in order to press an outer surface of the tyre against the at least one wall of the moulding cavity; and

applying heat to the tyre to vulcanize the first elastomer material;

wherein a shape of the at least one wall of the moulding cavity matches a shape of the outer surface of the tyre after vulcanization is complete, and

wherein the treatment comprises at least one layer of a second elastomer material comprising a sulfur-curable polymeric base and a vulcanizing system dissolved in an organic solvent.

18. (new) The process of claim 17, wherein the polymeric base is natural rubber, epoxy natural rubber, chloroprene, acrylonitrile-butadiene copolymers, halogenated butyl rubber,

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styrene-butadiene copolymers, isobutylene/p-methyl-styrene copolymers, halogenated isobutylene/p-methyl-styrene copolymers, polybutadiene, or mixtures thereof.

19. (new) The process of claim 18, wherein the polymeric base is natural rubber, chlorobutyl rubber, or a mixture thereof.

20. (new) The process of claim 17, wherein the vulcanizing system comprises a vulcanization accelerator selected from the group consisting of dithiocarbamates, thiourames, thiazole compounds, and mixtures thereof.

21. (new) The process of claim 20, wherein the vulcanization systems further comprises N-cyclohexyl-N-ethylamine or diphenylguanidine.

22. (new) A process for manufacturing, moulding, and curing a tyre, comprising the steps of:

manufacturing a green tyre comprising a first elastomer material;

providing an inner surface of the tyre with a treatment to prevent permeation of a fluid under pressure through the treatment;

closing the tyre into a moulding cavity defined in a vulcanization mould, the moulding cavity including at least one wall;

admitting a fluid under pressure into a space defined by the treatment in order to press an outer surface of the tyre against the at least one wall of the moulding cavity; and

applying heat to the tyre to vulcanize the first elastomer material;

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wherein a shape of the at least one wall of the moulding cavity matches a shape of the outer surface of the tyre after vulcanization is complete, and

wherein the treatment comprises at least one layer of a second elastomer material comprising a sulfur-curable polymeric base and a vulcanizing system in an aqueous emulsion.

23. (new) The process of claim 22, wherein the polymeric base is natural rubber, epoxy natural rubber, chloroprene, acrylonitrile-butadiene copolymers, halogenated butyl rubber, styrene-butadiene copolymers, isobutylene/p-methyl-styrene copolymers, halogenated isobutylene/p-methyl-styrene copolymers, polybutadiene, or mixtures thereof.

24. (new) The process of claim 23, wherein the polymeric base is natural rubber, chloroprene, acrylonitrile-butadiene copolymers, styrene-butadiene copolymers, isobutylene/p-methyl-styrene copolymers, or mixtures thereof.

25. (new) The process of claim 22, wherein the vulcanizing system comprises a vulcanization accelerator selected from the group consisting of dithiocarbamates, thiourames, thiazole compounds, or mixtures thereof.

26. (new) The process of claim 25, wherein the vulcanization system further comprises N-cyclohexyl-N-ethylamine or diphenylguanidine.--

REMARKS

Applicants submit this Preliminary Amendment together with a divisional application under 37 C.F.R. § 1.53(b).


In this Preliminary Amendment, Applicants add section headings, section subheadings, and an Abstract of the Disclosure to conform to U.S. practice. Additionally, Applicants add claims to the right of priority and benefit. Further, Applicants cancel, without prejudice or disclaimer, claims 2-16, and add new claims 17-26, which include the same subject matter as the original claims, to improve clarity. The originally-filed specification, claims, abstract, and drawings fully support the amendments to the specification and the addition of new claims 17-26. No new matter was introduced.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: December 26, 2001

By: 
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